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# Impulse control disorders and “behavioural addictions” in the ICD-11

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Psychiatric classifications have traditionally recognized a number of conditions as representing impulse control disorders. These have included pathological gambling, intermittent explosive disorder, kleptomania, pyromania, and trichotillomania.

In 1992, the World Health Organization (WHO) described habit and impulse disorders (F63) as characterized by repeated acts that have no clear rational motivation, generally harm the person's own interests and those of other people, and are associated with impulses the person experiences as uncontrollable (1). In DSM-IV-TR, the American Psychiatric Association further characterized these impulse control disorders as being preceded by a rise in tension before the behaviour or when resisting the behaviour, and followed by pleasure, gratification, or relief of tension (2).

In the past two decades, the public health importance of these disorders has become increasingly apparent. For example, pathological gambling and intermittent explosive disorder are prevalent conditions (lifetime prevalence rates of 1% and 3%, respectively) that are recognized to represent a substantial burden of disease (for example, increased health concerns, family discord, and financial problems) (3,4). Furthermore, there is a growing literature addressing the psychobiology and management of all of these impulse control disorders (5-7).

Some animal models and clinical imaging studies suggest that these conditions represent “behavioural addictions”, characterized by abnormalities in reward processing (8-11). As a result, proposals have been made to include compulsive sex, compulsive buying, and compulsive Internet use under this rubric, on the grounds that they too represent a large burden of disease and deserve appropriate diagnosis and treatment (7,12-14).

The WHO's development of the ICD-11 provides an important opportunity to optimize the classification and description of impulse control disorders and to address some of the controversies surrounding these putative “behavioural addictions”. The WHO has emphasized that ICD-11 should pay particular attention to issues of clinical utility, global applicability, and scientific validity (15).

The ICD-11 Working Group on Obsessive-Compulsive and Related Disorders was asked to review the scientific and other information about use, clinical utility, and experience with relevant ICD-10 diagnoses, including impulse control disorders; to review the approach of the DSM-5 to these conditions, with a focus on whether this approach might be suitable and useful for global applications; and to develop proposals for ICD-11, with a particular emphasis on improving clinical utility in a broad range of settings.

The Working Group has recommended that a grouping of impulse control disorders be retained in ICD-11. These disorders should be defined by the repeated failure to resist an impulse, drive, or urge to perform an act that is rewarding to the person (at least in the short-term), despite longer-term harm either to the individual or others. Impulse control disorders would therefore include pathological gambling, intermittent explosive disorder, kleptomania, and pyromania, as well as compulsive sexual behaviour disorder.

In the ICD-10, many of these behaviours are already conceptualized in this manner under the grouping of habit and impulse disorders. Trichotillomania is also listed under the same heading, but the Working Group has recommended it to be moved to the grouping of obsessive-compulsive and related disorders in ICD-11, and that skin picking (excoriation) disorder also be added to the same grouping. Compulsive sexual behaviour disorder will be new to this grouping, and would replace the ICD-10 category of excessive sexual drive. Other putative impulse control disorders such as problematic Internet use and compulsive buying do not appear at this time to have enough data to support their inclusion as independent mental health conditions.

A first key controversy in the field is whether pathological gambling and related conditions should be characterized as “behavioural addictions” and thereby be subsumed under a larger category that is more closely related to substance-related disorders. While a good deal of literature supports the idea that individuals with pathological gambling have altered reward circuitry (6), they also have other brain abnormalities. For example, prefrontal cortical dysfunction appears similar between gamblers and individuals with

mania (16,17). Additionally, although there is a shared genetic vulnerability between gambling and alcohol addiction, pathological gambling also shares genetic vulnerability factors with major depressive disorder (18). Therefore, categorizing gambling behaviour as an addiction, although heuristically appealing, seems premature based on the evidence. Furthermore, the change in categorization does not have clear clinical utility, insofar as a range of treatment approaches, other than those used in the treatment of substance addictions, may be useful for pathological gambling (for example, lithium and exposure therapies) (19,20).

A second key controversy in the field is whether compulsive sexual behaviour disorder should be included in the nosology. On the one hand, it is important that the classification does not pathologize normal behaviour. On the other, it is desirable that the classification allows for appropriate diagnosis and treatment of disorders that impact public health (21). Based on the definition of impulse control disorders as characterized by the inability to control behaviour despite its negative consequences, the Working Group recommended that compulsive sexual behaviour disorder be included in that grouping.

A third key controversy in the field is whether problematic Internet use is an independent disorder. The Working Group noted that this is a heterogeneous condition, and that use of the Internet may in fact constitute a delivery system for various forms of impulse control dysfunction (e.g., pathological game playing or pornography viewing). Importantly, the descriptions of pathological gambling and of compulsive sexual behaviour disorder should note that such behaviours are increasingly seen using Internet forums, either in addition to more traditional settings, or exclusively (22,23). The DSM-5 has included Internet gaming disorder in the section "Conditions for further study". Although potentially an important behaviour to understand, and one certainly with a high profile in some countries (12), it is questionable whether there is enough scientific evidence at this time to justify its inclusion as a disorder. Based on the limited current data, it would therefore seem premature to include it in the ICD-11.

A fourth key controversy is how best to draw thresholds for these disorders so that inappropriate diagnoses are not rendered for behaviours that are either normative (for example, sex) or simply illegal (for example, stealing). The WHO has emphasized a distinction between symptoms and disability (24). Where there is a continuum between normal and pathological behaviour, associated impairment may become a key determinant of whether or not a behaviour is disordered. An additional important consideration, from a public health perspective, is whether efficacious treatments are available. As noted above, these have now been developed for all impulse control disorders, particularly pathological gambling and intermittent explosive disorder (25,26).

There are a number of important differences between the proposals for the ICD-11 and the approach taken in the

DSM-5. These stem in part from the WHO's emphasis on clinical utility in a broad range of settings. In the DSM-5, the impulse control disorders grouping was dismantled, and pathological gambling was moved to the same section as substance addictions. Although evidence may indicate that pathological gambling resembles substance addictions in many ways, data also support its relationship to other impulse control disorders such as kleptomania, intermittent explosive disorder, and compulsive sexual behaviour (14). The outward clinical similarities of these disorders (that all of these behaviours are rewarding, at least initially, that they lead to feeling out of control, that the person reports urges or cravings, that no substance is taken into the body, and that there are no indications or outward signs of intoxication) further supports their unique categorization as impulse control disorders.

Another difference between the proposals for ICD-11 and DSM-5 is that the DSM-5 rejected its own Sexual and Gender Identity Disorders Work Group's proposal to include "hypersexuality". One objection to this proposal was its implicit normative reference to the "right amount" of sexuality. The ICD-11 Working Group believes that it is more clinically useful – both in terms of conceptualizing the symptomatology and of treatment strategies – to view compulsive sexual behaviour disorder as being related to other disorders that are also characterized by repeated failures to resist impulses, drives, or urges despite longer-term harm. Therefore, the Working Group has proposed replacing the ICD-10 concept of excessive sexual drive with a term that places greater emphasis on behaviour, and moving this condition to the grouping of impulse control disorders rather than placing the primary focus on the fact that the behaviour involved is sexual in nature.

The ICD-11 will be used globally, in a broad range of specialist and primary care settings, often by non-specialized health workers. There has been growing emphasis on encouraging screening for substance use disorders in these settings, and one advantage of expanding the substance use category to include behavioural addictions would be the encouragement of similar assessment and treatment approaches for a range of conditions, which taken together do constitute a major health problem but are often neglected by individual practitioners as well as by health care systems. At the same time, however, much remains unknown about the underlying psychobiology and optimal management of these conditions, some of them have only been described in Western contexts, and the boundaries between disorder and normality remain contested.

The Working Group therefore recommends, based on the current evidence, that there be a category of impulse control disorders and that it include pathological gambling, kleptomania, pyromania, compulsive sexual disorder, and intermittent explosive disorder. This approach differs from DSM-5, which splits these disorders across diagnostic categories. Instead, the ICD-11 proposal recommends keeping these together, so that clinicians can screen for them all. We

believe that this approach is much simpler, will be easier for clinicians to use, is more continuous with the previous classification, and will be more feasible in low-resource settings than the DSM-5 approach.

All proposals for the ICD-11 will be made publically available for review and comment. These recommendations therefore represent only a starting point, and set the stage for a global exchange about how best to address the nosology of these behaviours with the goal of improving its clinical utility. In addition, the proposals for ICD-11 will be field tested using two main approaches: an Internet-based approach and a clinical settings (clinic-based) approach.

Internet-based field studies will be implemented primarily through the Global Clinical Practice Network, a network currently consisting of nearly 10,000 individual mental health and primary care professionals in more than 100 countries ([www.globalclinicalpractice.net](http://www.globalclinicalpractice.net)). Clinic-based studies will be implemented through the network of collaborating international field study centers appointed by the WHO. The timing of the review and comment processes and of field studies will be such that their results can be integrated into the ICD-11 prior to its submission to the World Health Assembly for approval.

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